Space Weather Forecast

Issued on Wednesday, 10 November 2021 at 00:16 Local

This forecast provides a four day assessment of space weather events. The probabilities stated below are for reaching or exceeding the given levels. For more information about space weather impacts please see the Met Office Space Weather Scales https://www.metoffice.gov.uk/weather/learn-about/space-weather/uk-scales

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Space Weather Forecast Headline: No significant activity.

Analysis of Space Weather Activity over past 24 hours

Solar Activity: Solar Activity was at moderate levels, with a Moderate-class flare detected at 09/1703 UTC from a sunspot region out of view around the sun's western horizon. A large associated coronal mass ejection (CME) was seen in imagery, this is currently under analysis but not expected to be Earth-directed. No further Earth-directed CMEs were seen. Otherwise, solar activity was very low from the four magnetically simple sunspot regions visible, the largest of these located in the sun's northeast quadrant.

Solar Wind / Geomagnetic Activity: The solar wind speed was at slow levels between 350 and 400 km/s. Its magnetic field was weak, with no significant negative deflections in the important north-south direction. Resultant geomagnetic activity was Quiet to Unsettled.

Energetic Particles / Solar Radiation: No solar radiation storms were observed.

Four-Day Space Weather Forecast Summary

Solar Activity: Solar activity is expected to be very low, with a chance of Common-class flares, and a slight chance of Moderate-class flares, mainly on day 1 (10th) from a region out of view over the sun's western horizon.

Solar Wind / Geomagnetic Activity: No Earth-directed CMEs are expected, however up to two slow and weak CMEs could just give a weak glancing blow, most likely on day 2 (11th), but with minimal impacts expected. Generally slow solar winds expected through the period, but with some slight enhancements possible from weak coronal holes and possible CME effects. Geomagnetic activity is expected to be Quiet to Unsettled, with a low risk of Active intervals, mainly from day 2.

Energetic Particles / Solar Radiation: No solar radiation storms are expected.

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Met Office Space Weather Forecast

Geomagnetic Storms:

Geo-Magnetic Storm Probability (Exceedance)	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Minor or Moderate	G1 to G2	No	1	5	1	1
Strong	G3	No	1	1	1	1
Severe	G4	No	1	1	1	1
Extreme	G5	No	1	1	1	1

Radio Blackouts - X Ray Flares:

X Ray Flares Probability	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	R1-R2 M Class	No	10	5	5	5
Very Active	R3 to R5 X	No	1	1	1	1

Solar Radiation Storms - (High Energy Protons):

Radiation Storms Probability (Exceedance)	Level (cm^{-2} sr^{-1} s^{-1})	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	≥ S1	No	1	1	1	1
Very Active	≥ S3 *	No	1	1	1	1

* S3 ≥ 10 MeV ≥ 1000 pfu and / or ≥ 50 MeV ≥ 10 pfu. (pfu = $cm^{-2}sr^{-1}s^{-1}$)

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